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BRITISH COLUMBIA

Biophysical Habitat Classes for the Peace Arm of the Williston Reservoir Study Area

C. E. Thompson and L. E. H. Lacelle
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The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

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This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

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BIOPHYSICAL HABITAT CLASSES
FOR THE PEACE ARM OF THE
WILLISTON RESERVOIR STUDY AREA

1. Explanatory Notes

The project area occurs in northeastern British Columbia, along Williston Lake from Hudson Hope west. The project was requested by the Ministry of Environment, Lands and Parks, Williston Wildlife Compensation Program, Prince George, to map ecological units to aid in assessment of ungulate capability and suitability. Mapping Methodology follows Demarchi et al. (1990).

Three levels of biophysical classification are used in mapping habitat. These include Wildlife Ecoregions, Biogeoclimatic Units and Biophysical Classes. The study area has been mapped for Biogeoclimatic units by Delong, C. et al, 1990, Mackinnon, A., et al., 1990 and 1986 and A. Mackinnon, unpublished.

Ecoregions are a broad level of ecological differentiation based on macroclimatic processes, regional physiography, vegetation and wildlife biogeography (Demarchi, 1988). Ecoregions classification has three lower levels of generalization: ecoprovince, ecoregion and ecosection. These general categories are subdivided by biogeoclimatic zonation. Each unit provides a basis for interpreting relative snow depth, potential forage and potential cover for wildlife.

Biogeoclimatic Subzones are areas over which a distinct climax community or zonal ecosystem occurs. A subzone consists of unique sequences of geographically related ecosystems. A variant of which forested units may be subdivided into five successional sections.

Biogeoclimatic Variants are subdivisions of a subzone, and represent a further reduction in the climatic and geographic variability encountered within a subzone.

Biophysical Habitat Classes are areas within Biogeoclimatic Units that are relatively homogeneous with regard to soils, surficial materials, topographic position, disturbance history, topoclimate, animal use and trends of secondary succession. The forested habitat classes may be subdivided into five successional stages.

Three ecosections, seven Biogeoclimatic units and 79 Biophysical Classes, each of which may be subdivided into five successional stages are present in the study area.

The study area includes National Topographic (N.T.S.) map sheet 92B/1 and 2. The study area is mapped for habitat at a scale of 1:50,000.

Detailed descriptions of the habitat classes are described in Thompson and Lacelle (1992).

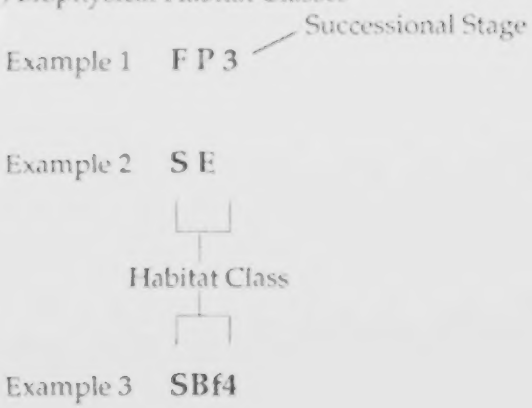
2. Map Boundaries

Study Area
Ecoregion
Biogeoclimatic Units
Biophysical Habitat Classes
Successional Stages

3. Examples of Map Unit Labels

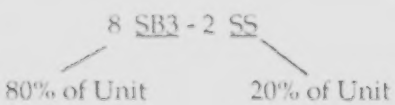
a) Ecosection and Biogeoclimatic Units

b) Biophysical Habitat Classes



4. Composite Units

Composite Units are used where two or three types of Classes are so distributed that they cannot be designated as separate units at the scale of mapping. Numbers before the Habitat symbol show the relative percentages, in tens, of each Class.



5. Ecoregions

Map Symbol	Ecosection	Description
	Hart Foothills	This area has the highest elevations and deepest snow depths in the study area. Snow depths decline from west to east in the rainshadow of the Hart Ranges Ecosection. Coniferous forests are common. Good winter ranges for mountain goat, caribou, mountain sheep and Rocky Mountain elk occur.
	Peace Lowland	This low elevation area was a former glacial lake bottom. Snow depths are low. Broad-leaved forests and agricultural fields are extensive. This high diversity wildlife area provides wintering habitat for mule deer, white-tailed deer, moose and Rocky Mountain elk. This area has a wide variety of bird species, of which many are not common in other parts of British Columbia.
	Sikanni-Beatton Plateau	This area is at higher elevations and has greater topographic relief than the Peace Lowland Ecosection. Coniferous and mixed forests are common. Winter range for ungulates is more limited than in the Peace Lowland Ecosection due to deeper snow, although in mid winters the area is used extensively.

6. Biogeoclimatic Units

Map Symbol	Biogeoclimatic Unit	Description
	Peace Moist Warm Boreal White and Black Spruce Variant	This subzone occurs in all Ecosections (see box 5). It is characterized by having climax forests of white spruce with an understory of highbush-cranberry, prickly rose, bunchberry, creamy peavine and tall bluebells. Mixed stands of white spruce and trembling aspen occur, with lessor amounts of lodgepole pine, balsam poplar, paper birch and black spruce. Wetlands are common in flatter areas.
	Murray Wet Cool Boreal White and Black Spruce	This subzone occurs in two Ecosections (see box 5). It is characterized by having climax forests of white spruce with an understory of black huckleberry, birch-leaved spirea, bunchberry, twinflower, heart-leaved arnica and trailing raspberry. Lodgepole pine is the dominant seral species and forms widespread forests along with minor amounts of white spruce and/or black spruce. Trembling aspen is common as a seral species at lower elevations. Black spruce occurs on organic and poor nutrient sites.
	Finlay-Peace Wet Cool Sub-Boreal Spruce Variant	This SBS subzone differs from the BWBS subzone by the absence of black spruce on mesic sites. This subzone is characterized by having climax forests of hybrid white spruce and subalpine fir with an understory of black gooseberry, highbush-cranberry, black huckleberry, oak fern, bunchberry, one-sided wintergreen, and a dense moss layer. Lodgepole pine is a seral species on mesic and dry sites. Mixed stands of hybrid white spruce and trembling aspen occur, with lessor amounts of paper birch and balsam poplar.

Map Symbol	Biogeoclimatic Unit	Description
	Bullmoose Moist Very Cold Engelmann Spruce - Subalpine Fir Variant	The ESSFmv subzone share a common zonal association and differ primarily in their wetter association between the two variants. The subhygric sites in the ESSFmv4 lack oak fern, clasping twistedstalk and devil's-club that are indicators of the ESSFmv2. Mesic forests of this variant consist of Engelmann spruce, subalpine fir with a well developed shrub canopy of white-flowered rhododendron, black huckleberry and a herb layer of bunchberry, one-sided wintergreen, and stiff clubmoss. Lodgepole pine is a common seral species.
	Graham Moist Very Cold Engelmann Spruce - Subalpine Fir Variant	Climax forests of this variant consist of Engelmann spruce, subalpine fir with a well developed shrub canopy of white-flowered rhododendron, black huckleberry and a herb layer of bunchberry, one-sided wintergreen and stiff clubmoss. Lodgepole pine is a common seral species. Wetter sites are characterized by the presence of red swamp gooseberry, black gooseberry and clasping twistedstalk.
	Misinchinka Wet Cold Variant Engelmann Spruce - Subalpine Fir Variant	Engelmann spruce and subalpine fir form climax forests with a well developed shrub and herb layer consisting of white-flowered rhododendron, black huckleberry, oval-leaved huckleberry, oak fern, five-leaved bramble, spiny wood fern with a dense moss layer.
	Alpine Tundra Zone	Alpine tundra occurs at elevations exceeding 1500 metres. On the lower tundra a shrub/forb community of scrub birch, mountain monkshood and spotted saxifrage occurs.

7. Habitat Classes and Successional Stages

7 (a) Biophysical Habitat Classes

Map Symbol	Habitat Class Name
BGC Unit - BWBSmwl	
*AN	Anthropogenic
AR	Trembling aspen - prickly rose fine-textured soil
AS	Trembling aspen - saskatoon warm aspect
*BA	Barren enscarpment
BD	Paper birch - red-osier dogwood cool aspect
BP	Black spruce - sphagnum bog
BS	Black spruce upland
*CF	Cultivated fields
DO	Devil's-club - oak fern moist
*GB	Gravel bar
*GP	Gravel pit
JK	Common juniper - kinnikinnick warm aspect
*L	Lake
LS	Lodgepole pine - soopolallie coarse-textured
PC	Balsam poplar - highbush-cranberry moist
*R	River
*ROc	Rock cool aspect
*ROw	Rock warm aspect
SA	White spruce - highbush-cranberry cool aspect, steep slope
SB	White spruce - bunchberry mesic
SBf	White spruce - bunchberry fluvial
SJ	Saskatoon - junegrass warm aspect shrub/grassland
SP	White spruce - balsam poplar floodplain
SRd	White spruce - fuzzy-spiked wildrye warm aspect, deep soil
SRs	White spruce - fuzzy-spiked wildrye warm aspect, shallow soil
SS	Scrub birch - sedge fen
SW	Saskatoon - wheatgrass steep warm aspect
WB	Bebb's willow - bluejoint swamp
WI	Willow swamp
*UR	Urban

BGC Unit - BWBSwk1

BL	Black spruce - lingonberry upland
BP	Black spruce - sphagnum bog
*CF	Cultivated fields
*L	Lake
RH	Prickly rose - horsetails floodplain
*RO	Rock
*ROc	Rock cool aspect
*ROw	Rock warm aspect
SC	White spruce - red swamp currant moist
SF	Scrub birch - sedge fen
SH	White spruce - black huckleberry mesic
SHc	White spruce - black huckleberry cool aspect
SHs	White spruce - black huckleberry shallow soil
SWd	White spruce - fuzzy-spiked wildrye warm aspect, deep soil
SWs	White spruce - fuzzy-spiked wildrye warm aspect, shallow soil

BGC Unit - SBSwk2

BB	Black spruce - sphagnum bog
BF	Black spruce - red-stemmed feathermoss upland
HC	Black huckleberry - highbush-cranberry coarse-textured soil
LF	Lodgepole pine - red-stemmed feathermoss warm aspect, shallow soil
LH	Lodgepole pine - black huckleberry warm aspect, deep soil
*ROc	Rock cool aspect
*ROw	Rock warm aspect
SD	Hybrid spruce - devil's-club moist
SE	Sedge wetland
SO	Hybrid spruce - oak fern mesic
SOc	Hybrid spruce - oak fern cool aspect
ST	Hybrid spruce - common horsetail floodplain

BGC Unit - ESSFmv2

FB	Subalpine fir - five-leaved bramble mesic
FBc	Subalpine fir - five-leaved bramble cool aspect
FC	Subalpine fir - crowberry ridge
FH	Subalpine fir - black huckleberry warm aspect, deep soil
FJ	Subalpine fir - bluejoint moist
FP	Subalpine fir - pink mountain-heather upper elevation
FS	Subalpine fir - scrub birch warm aspect, shallow soil
*RO	Rock
*ROc	Rock cool aspect
*ROw	Rock warm aspect
*RTc	Rock/Talus cool aspect
WH	Willow - common horsetail shrub carr

BGC Unit - ESSFmv4

FC	Subalpine fir - crowberry ridge
FP	Subalpine fir- pink mountain-heather upper elevation
PB	Cow parsnip - tall bluebells avalanche
*RO	Rock
*ROc	Rock cool aspect
*ROw	Rock warm aspect
*RTc	Rock/Talus cool aspect
SE	Sedge wetland
SG	Engelmann spruce - black goosebery moist
SL	Engelmann spruce - Labrador tea coarse-textured soil
SMd	Engelmann spruce - step moss warm aspect, deep soil
SMs	Engelmann spruce - step moss warm aspect, shallow soil
SU	Engelmann spruce - black huckleberry mesic
SUc	Engelmann spruce - black huckleberry cool aspect
WL	Willow swamp

BGC Unit - ESSFwk2

EB	Engelmann spruce - black huckleberry warm aspect, shallow soil
ED	Engelmann spruce - devil's-club moist
EF	Engelmann spruce - oak fern mesic
EFc	Engelmann spruce - oak fern cool aspect
ER	Engelmann spruce - white-flowered rhododendron warm aspect, deep soil
FC	Subalpine fir - crowberry ridge
PB	Cow parsnip - tall bluebells avalanche
*RO	Rock
*ROw	Rock warm aspect

BGC Unit - AT

AL	Arctic bluegrass - lichen upper ridge
BM	Scrub birch - mountain monkshood tundra
HD	Subalpine daisy - white mountain heather meadow
PB	Cow parsnip - tall bluebells avalanche
WM	Netted willow - entire-leaved mountain-avens slope
*RO	Rock
*ROc	Rock cool aspect
*ROw	Rock warm aspect

* Not described in legend

7(b) Successional Stages

1. Shrub/Herb
2. Pole Sapling (less than 20 years old)
3. Young Forests (20 - 60 years old)
4. Mature Forests (60 -120 years old)
5. Old Growth Forests (greater than 120 years old)

Successional stage numbers are not used, for non-forested units.

8. Sources of Information

a) British Columbia Ministry of Environment, Lands and Parks

i) B.C. Maps
1:60,000 aerial photographs (1986)
1:250,000 satellite imagery

ii) Lea, E.C. and L.E.H. Lacelle, 1989. Biophysical habitat units of the Lower Halfway study area: Explanatory Legend. Wildlife Working Report No. WR-43. Wildlife Branch, B.C. Ministry of Environment, Victoria, B.C. 29pp.

iii) Habitat Survey - soil, vegetation and wildlife (1991) - 54 plots

b) British Columbia Ministry of Forests

i) Forest Cover Maps 94B/1 and 2 - 1972

c) Fletcher Challenge

i) Clement, C. 1990. Biophysical Habitat Units of the Ospika River Drainage. Fletcher Challenge Canada, Nanaimo, B.C.

9. References

Delong, C., A. MacKinnon and L Jang. 1990. A Field Guide for Identification and Interpretation of Ecosystems of the Northeast Portion of the Prince George Forest Region.Land Management Handbook Number 21: ISSN 0229-1622 B.C. Ministry of Forests, Victoria, 108pp.

Demarchi, D.A. 1988. Ecoregions of British Columbia. Wildlife Branch, Ministry of Environment, Victoria, British Columbia. 1:2 000 000 map.

Demarchi, D.A., B.C. Lea, M.A. Fenger and A.P. Harcombe, 1990. Biophysical Habitat Methodology, First Draft. Wildlife Branch, Ministry of Environment, Lands and Parks, Victoria, B.C. 91pp.

MacKinnon A., C. Delong, and D. Meidinger. 1990. A Field Guide for Identification and Interpretation of Ecosystems of the Northwest Portion of the Prince George Forest Region. Land Management Handbook Number 22: ISSN 0229-1622. B.C. Ministry of Forests, Victoria, 116pp.

MacKinnon A., and A. McLeod. 1986 A Field Guide for Identification and Interpretation of Ecosystems of the ESSFh3 in the Prince George Forest Region. B.C. Ministry of Forests, Victoria, 33pp.

MacKinnon A. Biogeoclimatic Ecological Classification of the Engelmann Spruce - Subalpine fir Zone, ESSFn Biogeoclimatic Units. Unpublished. 50pp.

Thompson C. E. and L.E.H. Lacelle 1992. Biophysical Habitat Classes of the Williston Lake Study Area: Explanatory Legend. Unpublished, 1992.

10 Credits

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Date of Mapping: 1992

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BIOPHYSICAL HABITAT CLASSES FOR THE PEACE ARM OF THE WILLISTON RESERVOIR STUDY AREA:

EXPANDED LEGEND

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1992

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AR	Trembling aspen - prickly rose fine-textured soil habitat class				Biogeoclimatic Unit BWBSmwl
Description: level to moderately sloping areas of lacustrine or fluvial materials; average moisture regime; subjected to repeated fires in the past; low elevation sites					
	Map Symbol	AR1	AR2	AR3	AR4
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests
Successional Trends	Dominants	dense shrub cover of willow trembling aspen fireweed creamy peavine tall bluebells bluejoint	dense broad-leaved forest Of: trembling aspen willows prickly rose highbush-cranberry creamy peavine bunchberry twinflower bluejoint	dense broad-leaved forest Of: trembling aspen willows prickly rose highbush-cranberry creamy peavine bunchberry twinflower bluejoint	dense broad-leaved forest Of: trembling aspen Sitka alder highbush-cranberry creamy peavine bunchberry twinflower bluejoint
	Associates	prickly rose highbush-cranberry saskatoon showy aster heart-leaved arnica trailing raspberry	saskatoon soopolallie showy aster fireweed trailing raspberry American vetch	willow Sitka alder soopolallie saskatoon showy aster fireweed trailing raspberry American vetch	paper birch willow birch-leaved spirea wild sarsaparilla trailing raspberry fireweed creamy peavine
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows trembling aspen	willows trembling aspen prickly rose	prickly rose	
	Moderate (5-15% cover)	prickly rose highbush-cranberry saskatoon red honeysuckle paper birch	saskatoon highbush-cranberry	saskatoon highbush-cranberry	prickly rose willows saskatoon highbush-cranberry
Comments: repeated burns in early successional stages create a dense willow cover; this unit has been subjected to repeated fires which has removed conifer seed sources; these are similar to the White spruce - bunchberry mesic soil habitat class (SB)					

AS	Trembling aspen - saskatoon warm aspect habitat class			Biogeoclimatic Unit BWBSmw1
Description: steep slopes on warm aspects; solar radiation is high; droughty sites				
	Map Symbol	AS1	AS2	AS3	AS4
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests
Successional Trends	Dominants	shrub dominated cover of: saskatoon trembling aspen prickly rose showy aster fuzzy-spiked wildrye creamy peavine	dense broad-leaved forests of: saskatoon trembling aspen prickly rose showy aster fuzzy-spiked wildrye creamy peavine	dense broad-leaved forests Of: saskatoon trembling aspen prickly rose showy aster fuzzy-spiked wildrye creamy peavine	dense broad-leaved forests of: saskatoon trembling aspen prickly rose showy aster fuzzy-spiked wildrye creamy peavine
	Associates	choke cherry snowberry soopolallie wild sarsaparilla northern bedstraw slender wheatgrass fireweed	snowberry birch-leaved spirea American vetch	choke cherry soopolallie birch-leaved spirea wild sarsaparilla American vetch twin flower	choke cherry snowberry soopolallie birch-leaved spirea wild sarsaparilla American vetch
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	saskatoon trembling aspen	saskatoon trembling aspen fuzzy-spiked wildrye	saskatoon	saskatoon
	Moderate (5-15% cover)	prickly rose choke cherry snowberry willow fuzzy-spiked wildrye slender wheatgrass	saskatoon prickly rose	prickly rose choke cherry snowberry highbush-cranberry fuzzy-spiked wildrye	prickly rose choke cherry snowberry highbush-cranberry fuzzy-spiked wildrye
Comments: productive forage areas; dense shrub layers in all successional stages; white spruce may occur in later successional stages in northern parts of the study area; soils / surficial materials are sensitive to erosion, gulling and mass failure					

BD	Paper birch - red-osier dogwood *coal* aspect habitat class.				Biogeoclimatic Unit BWBSmwl
Description: steep slopes on cool aspects; usually colluvial surfical material; often associated with major river and creek valleys					
	Map Symbol	BD1	BD2	BD3	BD4	BD5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: saskatoon paper birch trembling aspen spreading dogbane creamy peavine	closed forests of: paper birch trembling aspen balsam poplar red-osier dogwood soopolallie saskatoon creamy peavine	closed forests of. paper birch white spruce red-osier dogwood highbush-cranberry twinflower	dosed forests of: white spruce red-osier dogwood highbush-cranberry twinflower moderate to dense moss cover	closed forests of: white spruce red-osier dogwood highbush-cranberry twinflower moderate to dense moss cover
	Associates	balsam poplar prickly rose choke cherry asters	highbush-cranberry prickly rose choke cherry twinflower	balsam poplar trembling aspen soopolallie prickly rose saskatoon creamy peavine	paper birch prickly rose snowberry bunchberry trailing raspberry one-sided wintergreen	paper birch prickly rose snowberry bunchberry trailing raspberry one-sided wintergreen
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	saskatoon paper birch trembling aspen balsam poplar	paper birch trembling aspen balsam poplar			
	Moderate (5-15% cover)	willow red-osier dogwood snowberry highbush-cranberry prickly rose wolf-willow choke cherry	willow red-osier dogwood snowberry highbush-cranberry prickly rose choke cherry	willow red-osier dogwood saskatoon snowberry highbush -cranberry prickly rose	red-osier dogwood saskatoon highbush-cranberry prickly rose	red-osier dogwood saskatoon highbush-cranberry prickly rose
Comments: good shrub production in early successional stages; sensitive sites due to steep slopes and unstable moist to wet soils; these sites may be good shrub producing areas after repeated burns and may be valuable for ungulate forage, particularly if they are intermixed with warmer aspects						

BP	Black spruce- sphagnum bog habitat class.	Biogeoclimatic Unit BWBSmwl
Description: level or depressional areas of shallow to deep organic material; high water table for most of the year; often has permafrost		
	Map Symbol	BP
	Stage	Edaphic Climax
Successional Trends	Dominants	open treed bog of: black spruce Labradortea sedges horsetails dense cover of sphagnum moss
	Associates	tamarack scrub birch willows bog cranberry lingonberry dwarf nagoonberry other moss species
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	scrub birch
	Moderate (5-15% cover)	sedges willows
Comments: low forage production for ungulates.		

BS	Black spruce upland habitat class				Biogeoclimatic Unit BWBSmwl
Description: occurs on level or gently sloping lacustrine materials with moister to drier than average soils					
	Map Symbol	BS1	BS2	BS3	BS4	BS5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: willows Labrador tea velvet-leaved blueberry fireweed	open forests of: lodgepole pine black spruce Labrador tea velvet-leaved blueberry bunchberry twinflower fireweed	open forests of: black spruce Labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry	open forests of: black spruce Labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry dense moss layer	open forests of: black spruce Labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry dense moss layer
	Associates	prickly rose soopolallie bunchberry twinflower sedges	willows prickly rose soopolallie dwarf blueberry lingonberry dwarf scouring-rush sedges	lodgepole pine prickly rose soopolallie dwarf blueberry dwarf scouring-rush sedges	lodgepole pine prickly rose soopolallie dwarf blueberry dwarf scouring-rush sedges	lodgepole pine prickly rose soopolallie dwarf blueberry dwarf scouring-rush sedges
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows				
	Moderate (5-15% cover)	sedges prickly rose	willows prickly rose sedges	prickly rose sedges	prickly rose sedges	prickly rose sedgss
Comments: These sites may have various amounts of balsam poplar, trembling aspen, white spruce and tamarack; low forage availability; limited area.						

DO	Devil's club - oak fern moist habitat class				Biogeoclimatic Unit BWBSmw1	
Description: moist gullies and fluvial fans; wetter than average moisture regime						
	Map Symbol	DO1	D02	DO3	DO4	DO5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: devil's-club oak fern horsetails pink pyrola bunchberry	open forests of: white spruce subalpine fir devil's-club oak fern horsetails pink pyrola bunchberry	open forests of: white spruce subalpine fir devil's-club oak fern horsetails pink pyrola bunchberry	open forests of: white spruce subalpine fir devil's-club oak fern horsetails pink pyrola bunchberry	open forests of: white spruce subalpine fir devil's-club oak fern horsetails pink pyrola bunchberry
	Associates	white spruce subalpine fir red-osier dogwood false Solomon's-seal trailing raspberry	red-osier dogwood false Solomon's-seal trailing raspberry	red-osier dogwood false Solomon's-seal trailing raspberry	red-osier dogwood false Solomon's-seal trailing raspberry	red-osier dogwood false Solomon's-seal trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)					
	Moderate (5-15% cover)	red-osier dogwood	red-osier dogwood	red-osier dogwood	red-osier dogwood	red-osier dogwood
Comments:						

JK	Common juniper - kinnikinnick warm aspect habitat class	Biogeoclimatic Unit BWBSmwl

Description: steep slopes on warm aspects; droughty sites; found on coarse-textured glaciofluvial materials; topoedaphic shrub/grassland climax

	Map Symbol	JK
	Stage	Edaphic Climax
Successional Trends	Dominants	forb dominated cover of: common juniper saskatoon kinnikinnick northern bedstraw purple reedgrass
	Associates	prickly rose yellow hedysarum cut-leaved anemone field pussytoes
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	saskatoon kinnikinnick

Comments: limited extent

LS	Lodgepole pine - soopolallie coarse-textured soil habitat class.				Biogeoclimatic Unit BWBSmwl
Description: sandy or gravelly soils of fluvial terraces, or sandy glaciofluvial materials; droughty soils with low nutrient availability; level to gently sloping					
	Map Symbol	LS1	LS2	LS3	LS4	LS5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub cover of: willow trembling aspen soopolallie prickly rose twinflower	open to dosed forests Of: lodgepole pine trembling aspen soopolallie prickly rose twinflower creamy peavine	open to dosed forests of: lodgepole pine trembling aspen soopolallie prickly rose twinflower creamy peavine	closed forests *of.* lodgepole pine white spruce soopolallie Labrador tea prickly rose twinflower creamy peavine moderate moss cover	closed forests of: lodgepole pine white spruce soopolallie Labrador tea prickly rose twinflower creamy peavine moderate moss cover
	Associates	saskatoon kinnikinnick bunchberry fireweed	saskatoon kinnikinnick bunchberry	white spruce black spruce saskatoon kinnikinnick lingonberry bunchberry rough-leaved ricegrass	paper birch trembling aspen black spruce saskatoon kinnikinnick lingonberry bunchberry wild lily-of-the-valley	paper birch trembling aspen black spruce saskatoon kinnikinnick lingonberry bunchberry wild lily-of-the-valley
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows				
	Moderate (5-15% cover)	prickly rose saskatoon highbush-cranberry	trembling aspen prickly rose saskatoon highbush-cranberry willow	prickly rose saskatoon highbush-cranberry	prickly rose saskatoon highbush-cranberry	prickly rose saskatoon highbush-cranberry
Comments: litter layers are important nutrient reservoirs; repeated burns are likely to degrade site.						

PC	Balsam poplar - highbush-cranberry moist habitat class				Biogeoclimatic Unit BWBSmwl
Description: moist, receiving sites of fine to medium-texture soils developed on lacustrine, morainal, fluvial or glaciofluvial materials					
	Map Symbol	PC1	PC2	PC3	PC4	PC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: willows balsam poplar trembling aspen prickly rose bluejoint	dense forests of balsam poplar prickly rose highbush-cranberry tall bluebells creamy peavine	dense forests of: balsam poplar prickly rose highbush-cranberry tall bluebells creamy peavine	dense forests of: balsam poplar prickly rose highbush-cranberry tall bluebells creamy peavine	dense forests of: balsam poplar prickly rose highbush-cranberry tall bluebells creamy peavine
	Associates	paper birch highbush-cranberry red-osier dogwood currants horsetails fireweed creamy peavine	paper birch trembling aspen willow red-osier dogwood currants palmate coltsfoot horsetails cow-parsnip	paper birch trembling aspen willow red-osier dogwood currants palmate coltsfoot horsetails cow-parsnip	white spruce paper birch trembling aspen willow red-osier dogwood currants palmate coltsfoot horsetails cow-parsnip	white spruce paper birch trembling aspen willow red-osier dogwood currants palmate coltsfoot horsetails cow-parsnip
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows balsam poplar trembling aspen	willows trembling aspen prickly rose	prickly rose	prickly rose	prickly rose
	Moderate (5-15% cover)	prickly rose highbush-cranberry red-osier dogwood red raspberry saskatoon	highbush-cranberry red-osier dogwood choke cherry red raspberry snowberry willow saskatoon	highbush-cranberry red-osier dogwood choke cherry red raspberry snowberry willow saskatoon	highbush-cranberry red-osier dogwood choke cherry red raspberry snowberry willow saskatoon	highbush-cranberry red-osier dogwood choke cherry red raspberry snowberry willow saskatoon
Comments: red-osier dogwood or alder may dominate the understory of this unit; repeated burns in the early successional stages create a dense willow cover; white spruce may be common in later successional stages, particularly in northern areas.						

SA	White spruce - highbush-cranberry cool aspect, steep slope habitat class				Biogeoclimatic Unit BWBSmwl
Description: steep slopes on deep to shallow morainal, glaciofluvial and colluvial materials; average moisture regime					
	Map Symbol	SA1	SA2	SA3	SA4	SA5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: willows trembling aspen paper birch highbush-cranberry bunchberry oak fern fireweed	dense forests of: white spruce highbush-cranberry bunchberry oak fern palmate coltsfoot	dense forests of: white spruce highbush-cranberry bunchberry oak fern palmate coltsfoot	dense forests of: white spruce highbush-cranberry bunchberry oak fern palmate coltsfoot dense moss layer	dense forests of: white spruce highbush-cranberry bunchberry oak fern palmate coltsfoot dense moss layer
	Associates	prickly rose black gooseberry twinflower trailing raspberry sweet-cicely bluejoint	trembling aspen paper birch Sitka alder black gooseberry twinflower trailing raspberry sweet-cicely	trembling aspen paper birch Sitka alder black gooseberry twinflower trailing raspberry sweet-cicely	trembling aspen paper birch Sitka alder black gooseberry twinflower trailing raspberry sweet-cicely	trembling aspen paper birch Sitka alder black gooseberry twinflower trailing raspberry sweet-cicely
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows highbush-cranberry	highbush-cranberry	highbush-cranberry		
	Moderate (5-15% cover)	trembling aspen paper birch prickly rose	trembling aspen paper birch willow prickly rose	prickly rose willow	highbush-cranberry	highbush-cranberry
Comments:						

SB	White spruce - bunchberry mesic habitat class					Biogeoclimatic Unit BWBSmwl
Description: gentle to moderately sloped areas of morainal or lacustrine material; average moisture regime						
	Map Symbol	SB1	SB2	SB3	SB4	SB5
	Stage	Shrub-Herb	Pole Sapling	YoungForests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: alder willows prickly rose fireweed bluejoint	closed forests of: trembling aspen prickly rose fuzzy-spiked wildrye showy aster creamy peavine	dosed forests of: trembling aspen prickly rose fuzzy-spiked wildrye showy aster creamy peavine	closed forests of: trembling aspen white spruce Sitka alder highbush-cranberry prickly rose birch-leaved spirea bunchberry, showy aster, pink pyrola, trailing raspberry, twinflower	closed forests of: trembling aspen white spruce Sitka alder highbush-cranberry prickly rose, birch-leaved spirea bunchberry, showy aster, pink pyrola, trailing raspberry, twinflower
	Associates	trembling aspen white spruce paper birch balsam poplar cow parsnip palmate coltsfoot	willows saskatoon American vetch	willows saskatoon American vetch	lodgepole pine paper birch soopolallie willows, palmate coltsfoot, bluejoint, wildrye, wild sarsaparilla,creamy peavine, American vetch, tall bluebells	lodgepole pine paper birch soopolallie willows, palmate coltsfoot, bluejoint, wildrye, wild sarsaparilla,creamy peavine, American vetch, tall bluebells
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen alder willows	willows prickly rose	willows prickly rose		
	Moderate (5-15% cover)	paper birch prickly rose	saskatoon	saskatoon	highbush-cranberry prickly rose	highbush-cranberry prickly rose
Comments: similar sites as the Trembling aspen - prickly rose (AR) habitat class but this unit has less fire history; repeated bums in early successional stages create a dense willow cover and removes conifer seed sources.						

SBf	White spruce - bunchberry fluvial habitat class				Biogeoclimatic Unit BWBSmw1
Description: gentle to moderately sloped areas on glaciofluvial and fluvial material; average moisture regime					
	MapSymbol	SBf1	SBf2	SBf3	SBf4	SBf5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: willows trembling aspen paper birch Sitka alder highbush-cranberry wild sarsaparilla fuzzy-spiked wildrye bunchberry fireweed	dense forests of: trembling aspen white spruce paper birch Sitka alder highbush-cranberry wild sarsaparilla fuzzy-spiked wildrye bunchberry fireweed	dense forests of: trembling aspen white spruce paper birch Sitka alder highbush-cranberry wild sarsaparilla fuzzy-spiked wildrye bunchberry fireweed	dense forests of: trembling aspen white spruce highbush-cranberry prickly rose bunchberry wild sarsaparilla fuzzy-spiked wildrye	dense forests of: white spruce highbush-cranberry prickly rose bunchberry wild sarsaparilla fuzzy-spiked wildrye
	Associates	white spruce lodgepole pine prickly rose birch-leaved spirea twinflower pink pyrola creamy peavine	lodgepole pine prickly rose birch-leaved spirea twinflower pink pyrola creamy peavine	lodgepole pine prickly rose birch-leaved spirea twinflower pink pyrola creamy peavine	lodgepole pine paper birch birch-leaved spirea Sitka alder pink pyrola showy aster creamy peavine	lodgepole pine trembling aspen Sitka alder pink pyrola showy aster creamy peavine
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	highbush-cranberry trembling aspen paper birch Sitka alder	highbush-cranberry trembling aspen paper birch Sitka alder	highbush-cranberry trembling aspen paper birch Sitka alder	highbush-cranberry	highbush-cranberry
	Moderate (5-15% cover)	willows prickly rose	willow prickly rose	prickly rose trembling aspen paper birch prickly rose	highbush-cranberry prickly rose Sitka alder	highbush-cranberry prickly rose
Comments: similar sites as the Trembling aspen - prickly rose (AR) habitat class but this unit has less fire history; repeated burns in early successional stages create a dense willow cover and removes conifer seed sources.						

SJ	Saskatoon-junegrass warm aspect shrub/grassland habitat class	Biogeoclimatic Unit BWBSmwl
Description: moderate to steep slopes on warm aspects; droughty sites; various surficial materials; topoedaphic shrub/grassland climax		
	Map Symbol	SJ
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub / forb cover of: saskatoon American vetch northern bedstraw junegrass
	Associates	choke cherry kinnikinnick sandwort
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	saskatoon
Comments: very steep areas have very low shrub cover and are grass dominated; heavy grazing on these sites promotes bare soil, sparse vegetation and accelerated soil erosion, particularly on steeper slopes.		

SP	White spruce - balsam poplar floodplain habitat class				Biogeoclimatic Unit BWBSmw1
Description: occurs on coarse-textured fluvial materials on floodplain sites; relatively high water table during parts of year					
	Map Symbol	SP1	SP2	SP3	SP4	SP5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: balsam poplar willow paper birch wolf-willow red-osier dogwood horsetails	dense forests of: balsam poplar red-osier dogwood prickly rose mountain alder common horsetails	dense forests of: balsam poplar white spruce red-osier dogwood prickly rose mountain alder common horsetails	dense forests of: balsam poplar white spruce red-osier dogwood prickly rose mountain alder common horsetail	dense forests of white spruce red-osier dogwood prickly rose mountain alder common horsetail
	Associates	rose bluejoint trailing raspberry Canada golden rod dandelion	paper birch white spruce willow wolf-willow trailing raspberry	paper birch willow snowberry trailing raspberry	highbush-cranberry trailing raspberry palmate coltsfoot	highbush-cranberry trailing raspberry palmate coltsfoot
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	balsam poplar willow wolf-willow red-osier dogwood	red-osier dogwood prickly rose	red-osier dogwood prickly rose	red-osier dogwood prickly rose	red-osier dogwood prickly rose
	Moderate (5-15% cover)	paper birch prickly rose saskatoon highbush-cranberry	saskatoon highbush-cranberry wolf-willow choke cherry	saskatoon highbush-cranberry wolf-willow choke cherry snowberry	saskatoon highbush-cranberry wolf-willow choke cherry snowberry	saskatoon highbush-cranberry wolf-willow choke cherry snowberry
Comments: high forage-producing areas; slightly drier upper floodplains have similar shrub layers with a herb and moss cover dominated by twinflower, bunchberry, trailing raspberry, wild sarsaparilla and mosses; wetter sites have abundant horsetails.						

SRd	White spruce - fuzzy-spiked wildrye warm aspect, deep soil habitat class.				Biogeoclimatic Unit BWBSmw1
Description: moderate to steep slopes on warm aspects; occurs on deep morainal and colluvial materials; drier than average soils					
	Map Symbol	SRd1	SRd2	SRd3	SRd4	SRd5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: soopolallie common juniper saskatoon prickly rose showy aster fuzzy-spiked wildrye	open forests of: trembling aspen soopolallie common juniper prickly rose showy aster fuzzy-spiked wildrye	open forests of: trembling aspen soopolallie common juniper prickly rose showy aster fuzzy-spiked wildrye	open forests of: trembling aspen soopolallie common juniper prickly rose showy aster fuzzy-spiked wildrye	open forests of: trembling aspen soopolallie common juniper prickly rose showy aster fuzzy-spiked wildrye
	Associates	trembling aspen lodgepole pine white spruce paper birch red-osier dogwood creamy peavine kinnikinnick	lodgepole pine white spruce paper birch saskatoon red-osier dogwood creamy peavine kinnikinnick	lodgepole pine white spruce paper birch saskatoon red-osier dogwood creamy peavine kinnikinnick	lodgepole pine white spruce paper birch saskatoon red-osier dogwood creamy peavine kinnikinnick	lodgepole pine white spruce paper birch saskatoon red-osier dogwood creamy peavine kinnikinnick
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	fuzzy-spiked wildrye	fuzzy-spiked wildrye	fuzzy-spiked wildrye	fuzzy-spiked wildrye	fuzzy-spiked wildrye
	Moderate (5-15%cover)	prickly rose willows saskatoon red-osier dogwood	prickly rose	prickly rose willows saskatoon	prickly rose	prickly rose
Comments: common juniper is present on the limestone derived terrain						

SRs	White spruce - fuzzy-spiked wildryerye warm aspect, shallow soil habitat class				Biogeoclimatic Unit BWBSmwl	
Description moderate to steep slopes on warm aspects; occurs on shallow materials; drier than average soils						
	MapSymbol	SRs1	SRs2	SRs3	SRs4	SRs5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	MatureForests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: trembling aspen saskatoon prickly rose kinnikinnick spreading dogbane	open forests of: trembling aspen saskatoon prickly rose kinnikinnick spreading dogbane	open forests of: trembling aspen saskatoon prickly rose kinnikinnick spreading dogbane	open forests of: trembling aspen saskatoon prickly rose kinnikinnick spreading dogbane	open forests of white spruce saskatoon prickly rose kinnikinnick spreading dogbane
	Associates	balsam poplar paper birch white spruce choke cherry soopolallie fringed aster northern bedstraw fuzzy-spiked wildrye	balsam poplar paper birch white spruce choke cherry soopolallie fringed aster northern bedstraw fuzzy-spiked wildrye	balsam poplar paper birch white spruce choke cherry soopolallie fringed aster northern bedstraw fuzzy-spiked wildrye	balsam poplar paper birch white spruce choke cherry soopolallie fringed aster northern bedstraw fuzzy-spiked wildrye	trembling aspen balsam poplar paper birch choke cherry soopolallie fringed aster northern bedstraw fuzzy-spiked wildrye
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen saskatoon	trembling aspen saskatoon	trembling aspen saskatoon	saskatoon	saskatoon
	Moderate (5-15% cover)	paper birch balsam poplar	paper birch balsam poplar	paper birch balsam poplar	trembling aspen paper birch balsam poplar	trembling aspen paper birch balsam poplar
Comments						

SS	Scrub birch-sedge fen habitat class	Biogeoclimatic Unit BWBSmwl

Description: level or depressional areas of shallow to deep organic material; high water table for most of the year

	Map Symbol	SS
	Stage	Edaphic Climax
Successional Trends	Dominants	Low to tall shrub cover of: willows scrub birch sedges dense moss cover
	Associates	tamarack arrow-leaved coltsfoot bluejoint dwarf nagoonberry horsetails other moss species
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows scrub birch sedges
	Moderate (5-15% cover)	

Comments: good forage production; tamarack may often dominate these sites, particularly on areas with hummocky terrain; wetter sites may have buckbean and arrow-grass; purple reedgrass may be abundant.

SW	Saskatoon-slender wheatgrass southerly aspect habitat class	Biogeoclimatic Unit BWBSmwl

Description: moderate to steep slopes of southeast to west aspect; droughty slopes; various surficial materials; topoedaphic shrub-grassland climax

	Map Symbol	SJ
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub/ grassland cover of: saskatoon, choke cherry prickly rose slender wheatgrass pasture sage
	Associates	common snowberry trembling aspen wolf willow, sedges junegrass, asters northern bedstraw
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	saskatoon choke cherry slender wheatgrass
	Moderate (5-15% cover)	roses common snowberry trembling aspen wolf willow pasture sage, junegrass

Comments: very steep areas have very low shrub cover and are grass dominated; heavy grazing on these sites promotes bare soil, sparse vegetation and accelerated soil erosion, particularly on steeper slopes;various other grass species may occur including fuzzy-spiked wildrye, needlegrass, bluegrass and fescues.

WB	Bebb's willow - bluejoint swamp habitat class	Biogeoclimatic Unit BWBSmwl
Description: imperfectly to poorly drained mineral soils of level to depressional sties; fine textured soils of lacustrine or morainal material.		
	Map Symbol	WB
	Stage	Edaphic Climax
Successional Trends	Dominants	tall shrub cover of: Bebb's willow alder (mountain or Sitka) bluejoint tall bluebells stinging nettle
	Associates	black twinberry highbush-cranberry currants common horsetail fireweed trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willow bluejoint
	Moderate (5-15% cover)	highbush-cranberry black twinberry currants
Comments: willows may be out of reach of ungulates.		

WI	Willow swamp habitat class	Biogeoclimatic Unit BWBSmwl
Description: floodplain of small creek areas; high water table for much growing season; seasonal deposition of material		
	Map Symbol	WI
	Stage	Edaphic Climax
Successional Trends	Dominants	tall shrub cover of: willows and / or alders common horsetail bluejoint bent grass
	Associates	balsam poplar sedges western meadowrue American vetch cow-parsnip
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows
	Moderate (5-15% cover)	balsam poplar black twinberry
Comments: willows may be out of reach of ungulates.		

BL	Black spruce - lingonberry upland habitat class				Biogeoclimatic Unit BWBSwk1
Description: occurs on gently sloping glaciofluvial materials with moister to drier than average soils					
	Map Symbol	BL1	BL2	BL3	BL4	BL5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: willows Labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry fireweed	open forests of: lodgepole pine black spruce labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry	open forests of: lodgepole pine black spruce labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry	open forests of: lodgepole pine black spruce labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry	open forests of: lodgepole pine black spruce labrador tea velvet-leaved blueberry bunchberry twinflower lingonberry
	Associates	black huckleberry prickly rose soopolallie palmate coltsfoot heart-leaved arnica	prickly rose black huckleberry soopolallie palmate coltsfoot heart-leaved arnica	prickly rose black huckleberry soopolallie palmate coltsfoot heart-leaved arnica	prickly rose black huckleberry soopolallie palmate coltsfoot heart-leaved arnica	prickly rose black huckleberry soopolallie palmate coltsfoot heart-leaved arnica
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows				
	Moderate (5-15% cover)	prickly rose	prickly rose	prickly rose	prickly rose	prickly rose
Comments:						

BP	Black spruce- sphagnum bog habitat class.	Biogeoclimatic Unit BWBSwk1
Description: level or depressional areas of shallow to deep organic material; high water table for most of the year; often has permafrost		
	Map Symbol	BP
	Stage	Edaphic Climax
Successional Trends	Dominants	open treed bog of: black spruce Labrador tea sedges horsetails dense cover of sphagnum moss
	Associates	tamarack scrub birch willows bog cranberry lingonberry dwarf nagoonberry other moss species
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	scrub birch
	Moderate (5-15% cover)	sedges willows
Comments: low forage production for ungulates.		

RH	Prickly rose - horsetails floodplain habitat class				Biogeoclimatic Unit BWBSwk1
Description: occurs on coarse-textured fluvial materials on floodplain sites					
	Map Symbol	RH1	RH2	RH3	RH4	RH5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth
Successional Trends	Dominants	shrub/herb cover of balsam poplar prickly rose black gooseberry red swamp currant horsetails tall bluebells palmate coltsfoot	dense forests of: balsam poplar prickly rose black gooseberry red swamp currant horsetails tall bluebells palmate coltsfoot	dense forests of: white spruce balsam poplar prickly rose black gooseberry red swamp currant horsetails tall bluebells palmate coltsfoot	dense forests of: white spruce prickly rose black gooseberry red swamp currant horsetails tall bluebells palmate coltsfoot	dense forests of: white spruce prickly rose black gooseberry red swamp currant horsetails tall bluebells palmate coltsfoot
	Associates	red osier dogwood bunchberry grasses tall larkspur	white spruce red osier dogwood bunchberry tall larkspur	red osier dogwood bunchberry tall larkspur	balsam poplar red osier dogwood bunchberry tall larkspur	balsam poplar red osier dogwood bunchberry tall larkspur
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	balsam poplar prickly rose	prickly rose	prickly rose	prickly rose	prickly rose
	Moderate (5-15% cover)	red-osier dogwood willows	red-osier dogwood willows	red-osier dogwood willows	red-osier dogwood willows	red-osier dogwood willows
Comments						

SC	White spruce - red swamp currant moist habitat class				Biogeoclimatic Unit BWBSwk1
Description: receiving slopes on morainal, lacustrine or fluvial materials; moist moisture regime					
	Map Symbol	SC1	SC2	SC3	SC4	SC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: white spruce black twinberry black gooseberry prickly rose trailing raspberry cow-parsnip tall bluebells meadow horsetail fireweed	open forests of: white spruce black twinberry black gooseberry prickly rose trailing raspberry cow-parsnip tall bluebells meadow horsetail	open forests of: white spruce black twinberry black gooseberry prickly rose trailing raspberry cow-parsnip tall bluebells meadow horsetail	open forests of: white spruce black twinberry black gooseberry prickly rose trailing raspberry cow-parsnip tall bluebells meadow horsetail	open forests of: white spruce black twinberry black gooseberry prickly rose trailing raspberry cow-parsnip tall bluebells meadow horsetail
	Associates	trembling aspen red swamp currant sweet-cicely common mitrewort tall larkspur common horsetail	trembling aspen red swamp currant sweet-cicely common mitrewort tall larkspur common horsetail	trembling aspen red swamp currant sweet-cicely common mitrewort tall larkspur common horsetail	trembling aspen red swamp currant sweet-cicely common mitrewort tall larkspur common horsetail	trembling aspen red swamp currant sweet-cicely carman mitrewort tall larkspur common horsetail
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen black twinberry	trembling aspen black twinberry	trembling aspen black twinberry	trembling aspen black twinberry	trembling aspen black twinberry
	Moderate (5-15% cover)	prickly rose	black twinberry trembling aspen prickly rose	black twinberry trembling aspen prickly rose	black twinberry trembling aspen prickly rose	black twinberry trembling aspen prickly rose
Comments: these sites show a high degree of variability						

SF	Scrub birch - sedge fen habitat class	Biogeoclimatic Unit BWBSwk1
Description: level or depressional areas of shallow to deep organic material; high water table for most of the year		
	Map Symbol	SF
	Stage	EdaphicClimax
Successional Trends	Dominants	low to tall shrub cover of: willows scrub birch Labrador tea sedges
	Associates	twinflower horsetails lingonberry palmate coltsfoot
Potential Winter Forage for Wild Ungulates	Abundant	willows scrub birch
	Associates	
Comments: good forage production		

SH	White spruce - black huckleberry mesic habitat class				Biogeoclimatic Unit BWBSwk1	
Description: level to moderate slopes; on lacustrine glaciofluvial and morainal materials; moderate moisture regime						
	Map Symbol	SH1	SH2	SH3	SH4	SH5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: lodgepole pine white spruce willows Sitka alder red raspberry fireweed bunchberry grasses palmate coltsfoot	open forests of: lodgepole pine trembling aspen white spruce Sitka alder black huckleberry fireweed bunchberry palmate coltsfoot	open forests of: lodgepole pine trembling aspen white spruce Sitka alder black huckleberry fireweed bunchberry palmate coltsfoot heart-leaved arnica	open forests of: lodgepole pine white spruce subalpine fir Sitka alder black huckleberry prickly rose bunchberry palmate coltsfoot heart-leaved arnica moderate moss cover	open forests of: white spruce subalpine fir Sitka alder black huckleberry prickly rose bunchberry palmate coltsfoot heart-leaved arnica moderate moss cover
	Associates	trembling aspen balsam poplar black huckleberry trailing raspberry tall bluebells sweet-cicely	subalpine fir highbush-cranberry willows heart-leaved arnica trailing raspberry	subalpine fir highbush-cranberry willows pink pyrola trailing raspberry	trembling aspen highbush-cranberry willows pink pyrola trailing raspberry	highbush-cranberry willows pink pyrola trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows fireweed alsike clover	fireweed			
	Moderate (5-15% cover)		trembling aspen subalpine fir black huckleberry highbush- cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry
Comments						

SHc	White spruce - black huckleberry cool aspect habitat class				Biogeoclimatic Unit BWBSwk1
Description: steep slopes on cool aspects; occurs on lacustrine and morainal materials; moderate moisture regime					
	Map Symbol	SHc1	SHc2	SHc3	SHc4	SHc5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: lodgepole pine white spruce willows Sitka alder red raspberry fireweed bunchberry palmate coltsfoot	open forests of: lodgepole pine trembling aspen white spruce Sitka alder black huckleberry fireweed bunchberry palmate coltsfoot	open forests of: lodgepole pine trembling aspen white spruce Sitka alder black huckleberry fireweed bunchberry palmate coltsfoot heart-leaved arnica	open forests of: lodgepole pine white spruce subalpine fir Sitka alder black huckleberry prickly rose bunchberry palmate coltsfoot heart-leaved arnica moderate moss cover	open forests of: white spruce subalpine fir Sitka alder black huckleberry prickly rose bunchberry palmate coltsfoot heart-leaved arnica moderate moss cover
	Associates	trembling aspen black huckleberry trailing raspberry tall bluebells sweet-cicely	subalpine fir highbush-cranberry willows heart-leaved arnica trailing raspberry	subalpine fir highbush-cranberry willows pink pyrola trailing raspberry	trembling aspen highbush-cranberry willows pink pyrola trailing raspberry	highbush-cranberry willows pink pyrola trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows fireweed alsike clover	fireweed			
	Moderate (5-15% cover)		trembling aspen subalpine fir black huckleberry highbush-cranberry	subalpine fir olack huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry
Comments						

SHs	White spruce - black huckleberry shallow soil habitat class					Biogeoclimatic Unit BWBSwk1
Description: level to moderate slopes; on shallow materials; moderate moisture regime						
	Map Symbol Stage	SHs1 Shrub-Herb	SHs2 Pole Sapling	SHs3 Young Forests	SHs4 Mature Forests	SHs5 Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: trembling aspen balsam poplar willows Sitka alder fireweed bunchberry heart-leaved arnica palmate coltsfoot fuzzy-spiked wildrye	open forests of: lodgepole pine trembling aspen white spruce Sitka alder willows black huckleberry fireweed bunchberry heart-leaved arnica palmate coltsfoot	open forests of lodgepole pine trembling aspen white spruce Sitka alder willows black huckleberry fireweed bunchberry heart-leaved arnica palmate coltsfoot	open forests of: lodgepole pine white spruce subalpine fir Sitka alder willows black huckleberry bunchberry heart-leaved arnica palmate coltsfoot	open forests of: lodgepole pine white spruce subalpine fir Sitka alder willows black huckleberry bunchberry heart-leaved arnica palmate coltsfoot
	Associates	black huckleberry trailing raspberry tall bluebells cow-parsnip sweet-cicely one-sided wintergreen	balsam poplar subalpine fir highbush-cranberry fuzzy-spiked wildrye one-sided wintergreen	balsam poplar subalpine fir highbush-cranberry fuzzy-spiked wildrye one-sided wintergreen	trembling aspen highbush-cranberry soopolallie maple fuzzy-spiked wildrye one-sided wintergreen	trembling aspen highbush-cranberry soopolallie maple fuzzy-spiked wildrye one-sided wintergreen
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows fireweed	fireweed			
	Moderate (5-15% cover)		trembling aspen subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir willows black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry
Comments						

SWd	White spruce - fuzzy-spiked wildrye warm aspect, deep soil habitat class					Biogeoclimatic Unit BWBSwk1
Description: moderate to steep slopes on warm aspects; occurs on deep morainal materials: drier than average moisture regime						
	Map Symbol	SWd1	SWd2	SWd3	SWd4	SWd5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: Sitka alder red raspberry soopolallie, willows birch-leaved spirea Labrador tea prickly rose fireweed, bluejoint fuzzy-spiked wildrye	open forests of: lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of: lodgepole pine trembling aspen soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of: lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of: white spruce lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica
	Associates	bunchberry twinflower showy aster heart-leaved arnica lodgepole pine trembling aspen paper birch	trembling aspen birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	trembling aspen birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)					
	Moderate (5-15% cover)	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye
Comments						

SWs	White spruce - fuzzy-spiked wildrye warm aspect, shallow soil habitat class				Biogeoclimatic Unit BWBSwk1
Description: moderate to steep slopes on warm aspects; occurs on shallow materials: drier than average moisture regime					
	Map Symbol	SWs1	SWs2	SWs3	SWs4	SWs5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: Sitka alder red raspberry soopolallie, willows birch-leaved spirea Labrador tea prickly rose fireweed, bluejoint fuzzy-spiked wildrye	open forests of: lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of: lodgepole pine trembling aspen soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of: lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica	open forests of white spruce lodgepole pine soopolallie prickly rose Labrador tea twinflower showy aster heart-leaved arnica
	Associates	bunchberry twinflower showy aster heart-leaved arnica lodgepole pine trembling aspen paper birch	trembling aspen birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	trembling aspen birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye	birch-leaved spirea willows creamy peavine bunchberry bluejoint fuzzy-spiked wildrye
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)					
	Moderate (5-15% cover)	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye	willows bluejoint fuzzy-spiked wildrye
Comments						

BB	Black spruce - sphagnum bog habitat class	Biogeoclimatic Unit SBSwk2

Description: level or depressional areas of shallow to deep organic material; high water table for most of the year

	Map Symbol	BB
	Stage	Edaphic Climax
Successional Trends	Dominants	open forests of: black spruce willows sedge moderate to dense cover of wetland mosses
	Associates	marsh cinquefoil
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	sedges
	Moderate (5-15% cover)	willows

Comments: low diversity of species

BF	Black spruce - red-stemmed feathermoss upland habitat class					Biogeoclimatic Unit SBSwk2
Description: occurs on level glaciofluvial materials; draughty poor nutrient sites						
	Map Symbol	BF1	BF2	BF3	BF4	BF5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of. Labrador tea crowberry lingonberry	open forests of lodgepole pine black spruce Labrador tea crowberry lingonberry	open forests of. black spruce lodgepole pine Labrador tea crowberry lingonberry	open forests of: black spruce lodgepole pine Labrador tea crowberry lingonberry dense moss layer	open forests of: black spruce lodgepole pine Labrador tea crowberry lingonberry dense moss layer
	Associates	willows bunchberry twinflower	willows bunchberry twinflower	black huckleberry dwarf blueberry palmate coltsfoot	black huckleberry dwarf blueberry bunchberry twinflower	black huckleberry dwarf blueberry bunchberry twinflower
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)					
	Moderate (5-15% cover)		-----	-----	-----	-----
Comments: low shrub production						

HC	Black huckleberry - highbush-cranberry coarse-textured habitat class					Biogeoclimatic Unit SBSwk2
Description: occurs on gentle to moderately sloping coarse-textured glaciofluvial material; drier than average moisture regime						
	Map Symbol	HC1	HC2	HC3	HC4	HC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: black huckleberry highbushcranberry bunchberry one-sided wintergreen	open forests of lodgepole pine hybrid white spruce black huckleberry highbushcranberry bunchberry one-sided wintergreen	open forests of lodgepole pine hybrid white spruce black huckleberry highbushcranberry bunchberry one-sided wintergreen	open forests of lodgepole pine hybrid white spruce black huckleberry highbushcranberry bunchberry one-sided wintergreen dense moss layer	open forests of hybrid white spruce subalpine fir black huckleberry highbushcranberry bunchberry one-sided wintergreen dense moss layer
	Associates	lodgepole pine hybrid white spruce subalpine fir birch-leaved spirea Sitka alder stiff clubmoss five-leaved bramble	subalpine fir birch-leaved spirea Sitka alder stiff clubmoss five-leaved bramble	subalpine fir birch-leaved spirea Sitka alder stiff clubmoss five-leaved bramble	subalpine fir birch-leaved spirea Sitka alder stiff clubmoss five-leaved bramble	lodgepole pine birch-leaved spirea Sitka alder stiff clubmoss five-leaved bramble
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	black huckleberry highbush-cranberry				
	Moderate (5-15% cover)	willows	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry	subalpine fir black huckleberry highbush-cranberry
Comments: limited extent in study area						

LF	Lodgepole pine - red-stemmed feathermoss warm aspect, shallow soil, habitat class					Biogeoclimatic Unit SBSwk2
Description: moderate to steep slopes on warm aspects; shallow soils; rapidly drained; low nutrient sites						
	Map Symbol	LF1	LF2	LF3	LF4	LF5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: willow Sitka alder black huckleberry highbush-cranberry saskatoon fireweed bunchberry one-sided wintergreen twinflower	open forests of: hybrid white spruce subalpine fir Sitka alder black huckleberry highbush-cranberry bunchberry one-sided wintergreen twinflower	open forests of: hybrid white spruce subalpine fir Sitka alder black huckleberry highbush-cranberry bunchberry one-sided wintergreen twinflower	open forests of: hybrid white spruce subalpine fir Sitka alder black huckleberry highbush-cranberry bunchberry one-sided wintergreen twinflower moderate moss layer	open forests of: hybrid white spruce subalpine fir Sitka alder black huckleberry highbush-cranberry bunchberry one-sided wintergreen twinflower moderate moss layer
	Associates	hybrid white spruce subalpine fir lodgepole pine black gooseberry soopolallie false Solomon's-seal	lodgepole pine black gooseberry soopolallie saskatoon fireweed false Solomon's-seal	lodgepole pine black gooseberry soopolallie saskatoon fireweed false Solomon's-seal	lodgepole pine black gooseberry soopolallie saskatoon fireweed false Solomon's-seal	lodgepole pine black gooseberry soopolallie saskatoon fireweed false Solomon's-seal
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willow Sitka alder				
	Moderate (5-15% cover)	saskatoon trembling aspen paper birch highbush-cranberry	willow Sitka alder subalpine fir paper birch subalpine fir	willow Sitka alder subalpine fir paper birch subalpine fir	willow Sitka alder subalpine fir paper birch subalpine fir	subalpine fir
Comments: open scrubby forest with sparse shrubs and herbs; low productivity						

LH	Lodgepole pine - black huckleberry warm aspect, deep soil habitat class					Biogeoclimatic Unit SBSwk2
Description: moderate to steep slopes on warm aspects; occurs on deep morainal materials, drier than average moisture						
	Map Symbol	LH1	LH2	LH3	LH4	LH5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: black huckleberry highbush-cranberry willows birch-leaved spirea bunchberry fireweed twinflower	open forests of. hybrid white spruce subalpine fir black huckleberry highbush-cranberry willows bunchberry fireweed twinflower	open forests of: hybrid white spruce subalpine fir black huckleberry highbush-cranberry willows bunchberry fireweed twinflower	open forests of: hybrid white spruce subalpine fir black huckleberry highbush-cranberry willows bunchberry fireweed twinflower	open forests of hybrid white spruce subalpine fir black huckleberry highbush-cranberry willows bunchberry fireweed twinflower
	Associates	hybrid white spruce subalpine fir lodgepole pine black gooseberry mountain-ash soopolallie prickly rose bluejoint, one-sided wintergreen	lodgepole pine black gooseberry mountain-ash soopolallie birch-leaved spirea bluejoint, one-sided wintergreen	lodgepole pine black gooseberry mountain-ash soopolallie birch-leaved spirea bluejoint, one-sided wintergreen	lodgepole pine black gooseberry mountain-ash soopolallie birch-leaved spirea bluejoint, one-sided wintergreen	lodgepole pine black gooseberry mountain-ash soopolallie birch-leaved spirea bluejoint,one-sided wintergreen
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows highbush-cranberry prickly rose	willows	willows subalpine fir	willows subalpine fir	willows subalpine fir
	Moderate (5-15% cover)		highbush-cranberry prickly rose	highbush-cranberry prickly rose	highbush-cranberry prickly rose	highbush-cranberry prickly rose
Comments: Young seral sites have a wide range of shrubs: mature forests are patchy and open						

SD	Hybrid white spruce - devil's club moist habitat class				Biogeoclimatic Unit SBSwkZ
Description: moist receiving slopes and gullies on glaciofluvial or morainal materials; moist sites					
	Map Symbol	SD1	SD2	SD3	SD4	SD5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: Sitka alder devil's club black gooseberry oak fern three-leaved foamflower horsetails	open forests of: hybrid white spruce Sitka alder devil's club black gooseberry oak fern three-leaved foamflower horsetails	open forests of: subalpine fir hybrid white spruce devil's club three-leaved foamflower horsetails bunchberry	open forests of subalpine fir hybrid white spruce devil's club Sitka alder oak fern three-leaved foamflower horsetail dense moss cover	open forests of: subalpine fir hybrid white spruce devil's club Sitka alder oak fern three-leaved foamflower horsetail dense moss cover
	Associates	western thimbleberry red-osier dogwood black twinberry lady fern one-leaved foamflower	western thimbleberry red-osier dogwood black twinberry lady fern one-leaved foamflower	lodgepole pine paper birch black gooseberry highbush-cranberry five-leaved bramble common mitrewort clasping twistedstalk	lodgepole pine paper birch black gooseberry highbush-cranberry five-leaved bramble common mitrewort clasping twistedstalk	lodgepole pine paper birch black gooseberry highbush-cranberry five-leaved bramble common mitrewort clasping twistedstalk
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	devil's-club	devil's-club	subalpine fir devil's-club	devil's-club	devil's-club
	Moderate (5-15% cover)	red-osier dogwood	red-osier dogwood	red-osier dogwood	subalpine fir red-osier dogwood	subalpine fir
Comments: stands usually open and dominated by robust vigorous shrubs						

SE	Sedge wetland habitat class	Biogeoclimatic Unit SBSwk2
Description: level or depressional areas of shallow to deep organic material; high water table for most of the year		
	Map Symbol	SE
	Stage	Edaphic Climax
Successional Trends	Dominants	herb dominated cover of: willows sedge moderate to dense cover of wetland mosses
	Associates	marsh cinquefoil
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	sedges
	Moderate (5-15% cover)	willows
Comments: low diversity of species		

SO	Hybrid white spruce-oak fern mesic habitat class				Biogeoclimatic Unit SBSwk2
Description: level to moderate slopes ; found on morainal, glaciofluvial and colluvial materials; average moisture regime					
	Map Symbol	SO1	SO2	SO3	SO4	SO5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: paper birch trembling aspen willow red raspberry fireweed bunchberry trailing raspberry	dense forests of: paper birch trembling aspen willows Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry	open forests of: paper birch trembling aspen highbush-cranberry red-osier dogwood willows Sitka alder oak fern trailing raspberry wild sarsaparilla pink wintergreen	closed forests of: hybrid white spruce Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry	closed forests of: hybrid white spruce Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry
	Associates	hybrid white spruce Sitka alder	prickly rose black gooseberry	hybrid white spruce balsam poplar highbush-cranberry	subalpine fir prickly rose black twinberry black gooseberry stiff clubmoss twinflower	subalpine fir prickly rose black twinberry black gooseberry stiff clubmoss twinflower
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows	trembling aspen willows		subalpine fir	subalpine fir
	Moderate (5-15% cover)	black blueberry	highbush-cranberry prickly rose	subalpine fir trembling aspen highbush-cranberry prickly rose	highbush-cranberry prickly rose	highbush-cranberry prickly rose
Comments: young seral sites have a diversity of shrubs and herbs; mature forests have a greater amount of canopy closure and less shrub/herb cover.						

set	Hybrid white spruce-oak fern cool aspect habitat class				Biogeoclimatic Unit SBSwk2
Description: steep slopes on cool aspects; found on morainal, glaciofluvial and colluvial materials; average moisture regime					
	Map Symbol	SCL	SOc2	SOc3	SOc4	SOc5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: paper birch trembling aspen willow red raspberry fireweed bunchberry trailing raspberry	dense forests of: paper birch trembling aspen willows Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry	open forests of: paper birch trembling aspen highbush-cranberry red-osier dogwood willows Sitka alder oak fern trailing raspberry wild sarsaparilla pink wintergreen	closed forests of: hybrid white spruce Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry	closed forests of: hybrid white spruce Sitka alder highbush-cranberry oak fern bunchberry trailing raspberry
	Associates	hybrid white spruce Sitka alder	prickly rose black gooseberry	hybrid white spruce balsam poplar highbush-cranberry	subalpine fir prickly rose black twinberry black gooseberry stiff clubmoss twinflower	subalpine fir prickly rose black twinberry black gooseberry stiff clubmoss twinflower
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	trembling aspen willows	trembling aspen willows		subalpine fir	subalpine fir
	Moderate (5-15% cover)	black blueberry	highbush-cranberry prickly rose	subalpine fir trembling aspen highbush-cranberry prickly rose	highbush-cranberry prickly rose	highbush-cranberry prickly rose
Comments: Young seral sites have a diversity of shrubs and herbs; mature forests have a greater amount of canopy closure and less shrub/herb cover.						

ST	Hybrid white spruce - common horsetail floodplain habitat class			Biogeoclimatic Unit SBSwk2	
Description: level fluvial materials on floodplain sites; relatively high water table during parts of the year					
	Map Symbol	ST1	ST2	ST3	ST4	ST5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	herb dominated cover of: balsam poplar willows mountain alder black twinberry common horsetail fireweed	open forests of: balsam poplar willows mountain alder black twinberry common horsetail fireweed	open forests of: balsam poplar highbush-cranberry black gooseberry trailing black currant common horsetail bunchberry fireweed wild strawberry	open forests of hybrid white spruce highbush-cranberry black gooseberry trailing black currant common horsetail bunchberry fireweed wild strawberry low moss cover	open forests of: hybrid white spruce highbush-cranberry black gooseberry trailing black currant common horsetail bunchberry fireweed wild strawberry low moss cover
	Associates	red raspberry bluejoint cow-parsnip	common horsetail bluejoint cow-parsnip	hybrid white spruce willows mountain alder cow-parsnip bluejoint	subalpine fir black twinberry prickly rose willows tall bluebells trailing raspberry bluejoint	subalpine fir black twinberry prickly rose willows tall bluebells trailing raspberry bluejoint
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)					
	Moderate (5-15% cover)	black twinberry willows	willows	willows highbush-cranberry	subalpine fir highbush-cranberry	subalpine fir highbush-cranberry
Comments						

FB	Subalpine fir - five-leaved bramble mesic habitat class				Biogeoclimatic Unit ESSFmv2
Description: gentle to moderate sloped areas of morainal material; average moisture regime					
	Map Symbol	FB1	FB2	FB3	FB4	FB5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: Engelmann spruce subalpine fir scrub birch willows black huckleberry Labrador tea bunchberry bluejoint stiff club-moss dwarf blueberry five-leaved bramble	closed forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry Sitka alder fireweed mountain arnica bunchberry	closed forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry Sitka alder fireweed mountain arnica bunchberry	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry one-sided wintergreen stiff club-moss five-leaved bramble dense moss layer	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry one-sided wintergreen stiff club-moss five-leaved bramble dense moss layer
	Associates	lodgepole pine white-flowered rhododendron Sitka alder fireweed	black gooseberry willows dwarf blueberry tall bluebells	black gooseberry willows dwarf blueberry tall bluebells	lodgepole pine Labrador tea black gooseberry mountain arnica	lodgepole pine Labrador tea black gooseberry mountain arnica
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	scrubbirch	black huckleberry	black huckleberry	subalpine fir white-flowered rhododendron black huckleberry	subalpine fir white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)	willows	subalpine fir white-flowered rhododendron fireweed willows	subalpine fir white-flowered rhododendron fireweed willows		
Comments						

FC	Subalpine fir - crowberry ridge habitat class				Biogeoclimatic Unit ESSFmv2
Description: moderate to steep ridge tops; shallow materials; drier than average moisture regime					
	Map Symbol	FC1	FC2	FC3	FC4	FC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: black huckleberry crowberry dwarf blueberry bunchberry	open forests of black huckleberry crowberry dwarf blueberry bunchberry	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens
	Associates	white-flowered rhododendron mountain arnica	lodgepole pine subalpine fir white-flowered rhododendron mountain arnica	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch
	Moderate (5-15% cover)	—	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

FBc	Subalpine fir - five-leaved bramble cool aspect habitat class					Biogeoclimatic Unit ESSFmv2
Description: steep slopes on morainal and colluvial material; average moisture regime						
	Map Symbol	FBcl	FBc2	FBc3	FBc4	FBc5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of Engelmann spruce subalpine fir scrub birch willows black huckleberry Labrador tea bunchberry bluejoint stiff club-moss dwarf blueberry five-leaved bramble	closed forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry Sitka alder fireweed mountain arnica bunchberry	closed forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry Sitka alder fireweed mountain arnica bunchberry	open to closed forests Of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry one-sided wintergreen stiff club-moss five-leaved bramble dense moss layer	open to closed forests Of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry one-sided wintergreen stiff club-moss five-leaved bramble dense moss layer
	Associates	lodgepole pine white-flowered rhododendron Sitka alder fireweed	black gooseberry willows dwarf blueberry tall bluebells	black gooseberry willows dwarf blueberry tall bluebells	lodgepole pine Labrador tea black gooseberry mountain arnica	lodgepole pine Labrador tea black gooseberry mountain arnica
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	scrub birch	black huckleberry	black huckleberry	subalpine fir white-flowered rhododendron black huckleberry	subalpine fir white-flowered rhododendron black huckleberry
	Moderate (545% cover)	willows	subalpine fir white-flowered rhododendron fireweed willows	subalpine fir white-flowered rhododendron fireweed willows		
Comments:						

FH	Subalpine fir - black huckleberry warm aspect, deep soil habitat class				Biogeoclimatic Unit ESSFmv2
Description: moderate to steep slopes on deep morainal materials; drier than average sites					
	Map Symbol	FH1	FH2	FH3	FH4	FH5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated cover of: black huckleberry white-flowered rhododendron willows crowberry pink mountain-heather	open forests of: lodgepole pine black huckleberry white-flowered rhododendron crowberry pink mountain-heather	open forests of: lodgepole pine black huckleberry white-flowered rhododendron crowberry pink mountain-heather	open forests of: lodgepole pine black huckleberry white-flowered rhododendron crowberry pink mountain-heather moderate moss layer	open forests of: lodgepole pine black huckleberry white-flowered rhododendron crowberry pink mountain-heather moderate moss layer
	Associates	subalpine fir Engelmann spruce mountain arnica	subalpine fir Engelmann spruce mountain arnica	subalpine fir Engelmann spruce mountain arnica	subalpine fir Engelmann spruce mountain arnica	subalpine fir Engelmann spruce mountain arnica
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron
	Moderate (5-15% cover)	willows	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

FJ	Subalpine fir - bluejoint moist habitat class				Biogeoclimatic Unit ESSFmv2
Description: receiving slopes; occurs on morainal and glaciofluvial materials; moisture than average soils					
	MapSymbol	FJ1	FJ2	FJ3	FJ4	FJ5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub dominated by: scrubbirch Sitka alder cow parsnip bluejoint Indian hellebore	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry bluejoint bunchberry five-leaved bramble	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry bluejoint bunchberry five-leaved bramble	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry bluejoint bunchberry five-leaved bramble	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry bluejoint bunchberry five-leaved bramble
	Associates	white-flowered rhododendron black huckleberry lady fern	scrubbirch Indian hellebore horsetails	scrubbirch Indian hellebore horsetails	scrub birch Sitka alder Indian hellebore horsetails	scrubbirch Sitka alder Indian hellebore horsetails
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	scrubbirch		white-flowered rhododendron	white-flowered rhododendron	white-flowered rhododendron
	Moderate (5-15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry subalpine fir	black huckleberry subalpine fir	subalpine fir black huckleberry	subalpine fir black huckleberry
Comments:						

FP	Subalpine fir - pink mountain-heather upper elevation habitat class					Biogeoclimatic Unit ESSFmv2
Description: moderate to steep slopes in upper elevation positions, abutting the Alpine Tundra; shallow materials; drier than average moisture regime						
	Map Symbol	FP1	FP2	FP3	FP4	FP5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel
	Associates	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	subalpine fir scrub birch	subalpine fir scrub birch	subalpine fir scrub birch	subalpine fir scrub birch	subalpine fir scrub birch
	Moderate (5-15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
Comments						

FS	Subalpine fir - scrub birch warm aspect, shallow soil habitat class					Biogeoclimatic Unit ESSFmv2
Description: moderate to steep slopes on shallow materials; drier than average moisture regime						
	Map Symbol	FS1	FS2	FS3	FS4	FS5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of. subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry crowberry dwarf blueberry pink mountain heather	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry crowberry dwarf blueberry pink mountain heather	open forests of subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry crowberry dwarf blueberry pink mountain heather	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry crowberry dwarf blueberry pink mountain heather	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry crowberry dwarf blueberry pink mountain heather
	Associates	scrub birch	scrub birch	scrub birch	scrub birch	scrub birch
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron	white-flowered rhododendron	white-flowered rhododendron	white-flowered rhododendron	white-flowered rhododendron
	Moderate (5-15% cover)	black huckleberry crowberry subalpine fir	black huckleberry crowberry subalpine fir	black huckleberry crowberry subalpine fir	black huckleberry crowberry subalpine fir	black huckleberry crowberry subalpine fir
Comments						

WH	Willow - common horsetail shrub carr habitat class	Biogeoclimatic Unit ESSFmv2
Description: occurs on gentle sloping lacustrine materials; moist soils		
	Map Symbol	WH
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub / herb cover of: willows common horsetail bluejoint arrow-leaved groundsel
	Associates	leafy aster Sitka valerian cow-parsnip tall bluebells
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows
	Moderate (5-15% cover)	
Comments:		

FC	Subalpine fir - crowberry ridge habitat class				Biogeoclimatic Unit ESSFmv4
Description: moderate to steep ridge tops; shallow materials; drier than average moisture regime					
	Map Symbol	FC1	FC2	FC3	FC4	FC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: black huckleberry crowberry dwarf blueberry bunchberry	open forests of: black huckleberry crowberry dwarf blueberry bunchberry	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens
	Associates	white-flowered rhododendron mountain arnica	lodgepole pine subalpine fir white-flowered rhododendron mountain arnica	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch
	Moderate (5-15% cover)	—	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

FP	Subalpine fir - pink mountain-heather upper elevation habitat class					Biogeoclimatic Unit ESSFmv4
Description: moderate to steep slopes in upper elevation positions, abutting the Alpine Tundra; shallow materials; drier than average moisture regime						
	Map Symbol	FP1	FP2	FP3	FP4	FP5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel	open forests of: subalpine fir scrub birch bunchberry pink mountain-heather bog-laurel
	Associates	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot	lodgepole pine white-flowered rhododendron black huckleberry Labrador tea willows palmate coltsfoot
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	subalpine fir scrub birch	subalpine fir scrub bitch	subalpine fir scrub birch	subalpine fir scrub birch	subalpine fir scrub birch
	Moderate (5-15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
Comments						

PB	Cow parsnip - tall bluebells avalanche habitat class	Biogeoclimatic Unit ESSFmv4
Description: steep cool aspects on colluvial materials; rich moist site		
	Map Symbol	PB
	Stage	Edaphic Climax
Successional Trends	Dominants	herb dominated cover of: cow parsnip fireweed tall bluebells alpine meadowrue common horsetail
	Associates	tall larkspur Indian hellebore arrow-leaved groundsel bracted lousewort
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	
Comments: herbaceous rich site		

SE	Sedge wetland habitat class	Biogeoclimatic Unit ESSFmv4
Description: level to depressional areas of shallow to deep organic material; high water table for most of the year		
Successional Trends	Map Symbol	SE
	Stage	Edaphic Climax
	Dominants	herb dominated cover of: sedges
	Associates	arrow-leaved ragwort asters fringed grass-of-Parnassus bluejoint horsetail moderate moss cover
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	sedges
	Moderate (5-15% cover)	willows (confined to perimeter)
Comments: limited extent in study area		

SG	Engelmann spruce - black gooseberry moist habitat class					Biogeoclimatic Unit ESSFmv4
Description: receiving slopes and gullies; occurs onmorainal and glaciofluvialmaterials; moister than average moisture regime						
	Map Symbol	SG1	SG2	SG3	SG4	SG5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: red swamp gooseberry willows bluejoint bunchberry	open forest cover of: subalpine fir Engelmann spruce lodepole pine red swamp currant black gooseberry white-flowered rhododendron bunchberry twinflower stiff club moss	open forest cover of: subalpine fir Engelmann spruce lodepole pine red swamp currant black gooseberry white-flowered rhododendron bunchberry twinflower stiff club moss	open forest cover of. subalpine fir Engelmann spruce lodepole pine red swamp currant black gooseberry white-flowered rhododendron bunchberry twinflower stiff dub moss dense moss layer	open forest cover of: subalpine fir Engelmann spruce red swamp currant black gooseberry white-flowered rhododendron bunchberry twinflower stiff club moss dense moss layer
	Associates	lodgepole pine white-flowered rhododendron black huckleberry one-sided wintergreen trailing raspberry twinflower	black huckleberry one-sided wintergreen bluejoint trailing raspberry	black huckleberry one-sided wintergreen bluejoint trailing raspberry	black huckleberry one-sided wintergreen bluejoint trailing raspberry	lodgepole pine black huckleberry one-sided wintergreen bluejoint trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willows				
	Moderate (5-15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry subalpine fir	white-flowered rhododendron black huckleberry subalpine fir	white-flowered rhododendron black huckleberry subalpine fir
Comments: these sites can be quite variable						

SL	Engelmann spruce - Labrador tea coarse-textured soil habitat class				Biogeoclimatic Unit ESSFmv4	
Description: moderate slopes on coarse-textured glaciofluvial materials; droughty soils; low nutrient sites						
	Map Symbol	SL1	SL2	SL3	SL4	SL5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: white-flowered rhododendron black huckleberry trembling aspen mountain arnica	open forests of: lodgepole pine white-flowered rhododendron black huckleberry mountain arnica	open forests of: lodgepole pine white-flowered rhododendron black huckleberry mountain arnica	open forests of: lodgepole pine Engelmann spruce subalpine fir Labrador tea black huckleberry soopolallie bunchberry dense moss layer	open forests of: lodgepole pine Engelmann spruce subalpine fir Labrador tea black huckleberry soopolallie bunchberry dense moss layer
	Associates	lodgepole pine willows Sitka mountain ash Indian hellebore	trembling aspen subalpine fir Engelmann spruce willows Sitka mountain ash Indian hellebore	trembling aspen subalpine fir Engelmann spruce willows Sitka mountain ash Indian hellebore	white-flowered rhododendron lingonberry crowberry	white-flowered rhododendron lingonberry crowberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron
	Moderate (5-15% cover)	willows trembling aspen	subalpine fir willows	subalpine fir willows	subalpine fir willows	
Comments						

SMd	Engelmann spruce - step moss warm aspect, deep soil habitat class					Biogeoclimatic Unit ESSFmv4
Description: moderate to steep slopes on deep morainal materials; drier than average moisture regime						
	Map Symbol	SMd1	SMd2	SMd3	SMd4	SMdS
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of black huckleberry white-flowered rhododendron highbush-cranberry bunchberry blue wildrye	open forests of: subalpine fir Engelmann spruce lodgepole pine black huckleberry highbush- cranberry bunchberry twinflower	open forests of: subalpine fir Engelmann spruce lodgepole pine black huckleberry highbush-cranberry bunchberry twinflower	open forests of: subalpine fir Engelmann spruce lodgepole pine black huckleberry highbush-cranberry bunchberry twinflower dense moss cover	open forests of: subalpine fir Engelmann spruce black huckleberry highbush-cranberry bunchberry twinflower dense moss cover
	Associates	twinflower heart-leaved arnica one-sided wintergreen	white-flowered rhododendron one-sided wintergreen blue wildrye	white-flowered rhododendron one-sided wintergreen blue wildrye	white-flowered rhododendron one-sided wintergreen blue wildrye	lodgepole pine white-flowered rhododendron one-sided wintergreen blue wildrye
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron
	Moderate (5-15% cover)			subalpine fir	subalpine fir	subalpine fir
Comments						

SMs	Engelmann spruce - step moss warm aspect, shallow soil habitat class				Biogeoclimatic Unit ESSFmv4
Description: moderate to steep slopes on shallow materials; drier than average moisture regime					
	Map Symbol	SMs1	SMs2	SMs3	SMs4	SMs5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: black huckleberry white-flowered rhododendron highbush -cranberry bunchberry blue wildrye	open forests of: lodgepole pine subalpine fir Engelmann spruce black huckleberry highbush-cranberry bunchberry twinflower	open forests of: lodgepole pine subalpine fir Engelmann spruce black huckleberry highbush-cranberry bunchberry twinflower	open forests of: subalpine fir Engelmann spruce lodgepole pine black huckleberry highbush-cranberry bunchberry twinflower dense moss cover	open forests of: subalpine fir Engelmann spruce black huckleberry highbush-cranberry bunchberry twinflower dense moss cover
	Associates	lodgepole pine Engelmann spruce subalpine fir Labrador tea twinflower heart-leaved arnica one-sided wintergreen	Labrador tea white-flowered rhododendron heart-leaved arnica one-sided wintergreen blue wildrye	Labrador tea white-flowered rhododendron heart-leaved arnica one-sided wintergreen blue wildrye	Labrador tea white-flowered rhododendron heart-leaved arnica one-sided wintergreen blue wildrye	lodgepole pine Labrador tea white-flowered rhododendron heart-leaved arnica one-sided wintergreen blue wildrye
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron	black huckleberry white-flowered rhododendron
	Moderate (5-15% cover)			subalpine fir	subalpine fir	subalpine fir
Comments						

SU	Engelmann spruce - black huckleberry mesic habitat class				Biogeoclimatic Unit ESSFmv4
Description: gentle to moderate slopes; on morainal materials; average moisture regime					
	Map Symbol	SU1	SU2	SU3	SU4	SU5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: Engelmann spruce subalpine fir lodgepole pine white-flowered rhododendron black huckleberry willows mountain arnica Indian hellebore	open forests of lodgepole pine white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore	open forests of: lodgepole pine white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry mountain arnica bunchberry Indian hellebore	open forests *of:* Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore
	Associates	western mountain ash trembling aspen	subalpine fir Engelmann spruce trembling aspen willows	subalpine fir Engelmann spruce trembling aspen willows	'odgepole pine trembling aspen dwarf blueberry	lodgepole *pine* trembling aspen dwarf blueberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry willows	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)	—	subalpine fir willows	subalpine fir	subalpine fir	subalpine fir
Comments						

SUc	Engelmann spruce - black huckleberry cool aspect habitat class				Biogeoclimatic Unit ESSFmv4
Description: steep slopes on cool aspects; on morainal and colluvial materials; average moisture regime					
	Map Symbol	SUc1	SUc2	SUc3	SUc4	SUc5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: Engelmann spruce subalpine fir lodgepole pine white-flowered rhododendron black huckleberry willows mountain arnica Indian hellebore	open forests of: lodgepole pine white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore	open forests of: lodgepole pine white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry mountain arnica bunchberry Indian hellebore	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron black huckleberry bunchberry mountain arnica Indian hellebore
	Associates	western mountain-ash trembling aspen	subalpine fir Engelmann spruce trembling aspen willows	subalpine fir Engelmann spruce trembling aspen willows	lodgepole pine trembling aspen dwarf blueberry	lodgepole pine trembling aspen dwarf blueberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry willows	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)		subalpine fir willows	subalpine fir	subalpine fir	subalpine fir
Comments						

WL	Willow swamp habitat class	Biogeoclimatic Unit ESSFmv4
Description: floodplain of small creek areas; high water table for much of the growing season; seasonal deposition of material.		
	Map Symbol	WL
	Stage	EdaphicClimax
Successional Trends	Dominants	tall shrub cover of: willow black twinberry mountain alder red swamp gooseberry common horsetail
	Associates	balsam poplar bluejoint tall bluebells trailing raspberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	willow
	Moderate (5-15% cover)	balsam poplar black twinberry
Comments: willows may be out of reach of ungulates.		

EB	Engelmann spruce - black huckleberry warm aspect, shallow soil habitat class					Biogeoclimatic Unit ESSFwk2
Description: moderate to steep slopes on shallow materials; drier than average moisture regime						
	Map Symbol Stage	EB1 Shrub-Herb	EB2 Pole Sapling	EB3 Young Forests	EB4 Mature Forests	EB5 Old Growth Forests
Successional Trends	Dominants	shrub cover of: white-flowered rhododendron black huckleberry five-leaved bramble Sitka valerian oak fern	open forests of: lodgepole pine white-flowered rhododendron black huckleberry five-leaved bramble Sitka valerian oak fern	open forests of; lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry five-leaved bramble Sitka valerian oak fern	open forests of; lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry five-leaved bramble Sitka valerian oak fern moderate moss cover	open forests of; subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry five-leaved bramble Sitka valerian oak fern moderate moss cover
	Associates	one-leaved foamflower queen'scup bunchberry	subalpine fir Engelmann spruce one-leaved foamflower queen'scup bunchberry	one-leaved foamflower queen'scup bunchberry	one-leaved foamflower queen'scup bunchberry	lodgepole pine one-leaved foamflower queen'scup bunchberry
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)		subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

ED	Engelmann spruce - devil's-club moist habitat class					Biogeoclimatic Unit ESSFwk2
Description: receiving slopes and gullies; usually on morainal materials; moister than average moisture regime						
	Map Symbol	ED1	ED2	ED3	ED4	ED5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: devil's-club white-flowered rhododendron oval-leaved blueberry Sitka alder spiny wood fern oak fern five-leaved bramble	open forests of: lodgepole pine subalpine fir Engelmann spruce devil's-club white-flowered rhododendron oval-leaved blueberry spiny wood fern oak fern five-leaved bramble	open forests of: lodgepole pine subalpine fir Engelmann spruce devil's-club white-flowered rhododendron Sitka alder oval-leaved blueberry spiny wood fern oak fern five-leaved bramble	open forests of: lodgepole pine subalpine fir Engelmann spruce devil's-club white-flowered rhododendron oval-leaved blueberry spiny wood fern oak fern five-leaved bramble moderate moss cover	open forests of: subalpine fir Engelmann spruce devil's-club white-flowered rhododendron oval-leaved blueberry spiny wood fern oak fern five-leaved bramble moderate moss cover
	Associates	black twinberry one-leaved foamflower stiff club moss clasping twistedstalk	Sitka alder black twinberry one-leaved foamflower stiff club moss clasping twistedstalk	black twinberry one-leaved foamflower stiff club moss clasping twistedstalk	Sitka alder black twinberry one-leaved foamflower stiff club moss clasping twistedstalk	Sitka alder black twinberry one-leaved foamflower stiff club moss clasping twistedstalk
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron oval-leaved blueberry	white-flowered rhododendron oval-leaved blueberry	white-flowered rhododendron oval-leaved blueberry	white-flowered rhododendron oval-leaved blueberry	white-flowered rhododendron oval-leaved blueberry
	Moderate (5-15% cover)	subalpine fir	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

EF	Engelmann spruce - oak fern mesic habitat class					Biogeoclimatic Unit ESSFwk2
Description: level to moderate slopes on morainal materials; average moisture regime						
	Map Symbol	EF1	EF2	EF3	EF4	EF5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern dense moss layer	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern dense moss layer
	Associates	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	subalpine fir Engelmann spruce oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)	—	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

EFc	Engelmann spruce - oak fern cool aspect habitat class				Biogeoclimatic Unit ESSFwk2	
Description: steep slopes on cool aspects; occurs on morainal and colluvial materials; average moisture regime						
	Map Symbol	EFc1	EFc2	EFc3	EFc4	EFc5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub/herb cover of: white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern	open forests of: lodgepole pine subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern dense moss layer	open forests of: subalpine fir Engelmann spruce white-flowered rhododendron black huckleberry oak fern five-leaved bramble spiny wood fern dense moss layer
	Associates	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	subalpine fir Engelmann spruce oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian	oval-leaved blueberry one-leaved foamflower Indian hellebore Sitka valerian
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry	white-flowered rhododendron black huckleberry
	Moderate (5-15% cover)		subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

ER	Engelmann spruce - white-flowered rhododendron warm aspect, deep soil habitat class					Biogeoclimatic Unit ESSFwk2
Description: moderate to steep slopes on deep morainal and glaciofluvial materials; drier than average moisture regime						
	Map Symbol	ER1	ER2	ER3	ER4	ER5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	shrub cover of: white-flowered rhododendron Sitka alder bunchberry heart-leaved arnica	open forests of: lodgepole pine white-flowered rhododendron Sitka alder bunchberry heart-leaved arnica	open forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron Sitka alder bunchberry heart-leaved arnica	open forests of: lodgepole pine Engelmann spruce subalpine fir white-flowered rhododendron Sitka alder bunchberry heart-leaved arnica	open forests of: Engelmann spruce subalpine fir white-flowered rhododendron Sitka alder bunchberry heart-leaved arnica
	Associates	black huckleberry stiff clubmoss palmate coltsfoot twinflower	Engelmann spruce subalpine fir black huckleberry stiff clubmoss palmate coltsfoot twinflower	black huckleberry stiff clubmoss palmate coltsfoot twinflower	black huckleberry stiff clubmoss palmate coltsfoot twinflower	lodgepole pine black huckleberry stiff clubmoss palmate coltsfoot twinflower
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron Sitka alder	white-flowered rhododendron Sitka alder	white-flowered rhododendron Sitka alder	white-flowered rhododendron Sitka alder	white-flowered rhododendron Sitka alder
	Moderate (5-15% cover)	black huckleberry willows	black huckleberry subalpine fir	black huckleberry subalpine fir	black huckleberry subalpine fir	black huckleberry subalpine fir
Comments:						

FC	Subalpine fir - crowberry ridge habitat class				Biogeoclimatic Unit ESSFwk2
Description: moderate to steep ridge tops; shallow materials; drier than average moisture regime					
	Map Symbol	FC1	FC2	FC3	FC4	FC5
	Stage	Shrub-Herb	Pole Sapling	Young Forests	Mature Forests	Old Growth Forests
Successional Trends	Dominants	dense shrub cover of: black huckleberry crowberry dwarf blueberry bunchberry	open forests of black huckleberry crowberry dwarf blueberry bunchberry	open forests of subalpine fir Engelmann spruce black huckleberry mountain arnica	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens	open forests of: subalpine fir Engelmann spruce black huckleberry mountain arnica low cover of lichens
	Associates	white-flowered rhododendron mountain arnica	lodgepole pine subalpine fir white-flowered rhododendron mountain arnica	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub bitch	lodgepole pine dwarf blueberry pink mountain heather white-flowered rhododendron scrub birch
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch	white-flowered rhododendron black huckleberry scrub birch
	Moderate (5-15% cover)	—	subalpine fir	subalpine fir	subalpine fir	subalpine fir
Comments						

PB	Cow parsnip - tall bluebells avalanche habitat class	Biogeoclimatic Unit ESSFwk2
Description: steep cool aspects on colluvial materials; rich moist site		
	Map Symbol	PB
	Stage	Edaphic Climax
Successional Trends	Dominants	herb dominated cover of: cow parsnip fireweed tall bluebells alpine meadowrue common horsetail
	Associates	tall larkspur Indian hellebore arrow-leaved groundsel bracted lousewort
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	
Comments: herbaceous rich site		

AL	Arctic bluegrass - lichen tipper ridge habitat class	Biogeoclimatic Unit AT
Description: moderate to steep slopes on shallow colluvial materials in upper elevation positions		
	Map Symbol	AL
	Stage	Edaphic Climax
Successional Trends	Dominants	forb community of: arctic bluegrass sedge alpine arnica mountain sorrel lichens
	Associates	altai fescue mountain monkshood spotted saxifrage
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover) Moderate (5-15% cover)	—
Comments: high percentage of stones on surface; located on Gething Mountain and an unnamed mountain on 94 B/1		

BM	Scrub birch - mountain monkshood - tundra habitat class	Biogeoclimatic Unit AT

Description: level to gentle slopes on shallow colluvial materials; moderate moisture regime; always in wind exposed positions; typically on ridge tops; high percentage of exposed stones and frost action

	Map Symbol	BM
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub/forb community of: scrub birch altai fescue field locoweed
	Associates	netted willow mountain monkshood spotted saxifrage arctic bluegrass alpine arnica entire-leaved mountain-avens
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	subalpine fir

Comments:

HD	Subalpine daisy - white mountain heather meadow habitat class	Biogeoclimatic Unit AT
Description: steep cool aspects; colluvial materials; moist sites		
	Map Symbol	HD
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub/herb cover of: white mountain heather scrub birch subalpine daisy
	Associates	subalpine fir Engelmann spruce mountain arnica bracted lousewort pink mountain-heather arctic bluegrass
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	subalpine fir scrub birch
Comments: limited extent		

PB	Cow parsnip - tall bluebells avalanche habitat class	Biogeoclimatic Unit AT
Description: steep cool aspects on colluvial materials; rich moist site		
	Map Symbol	PB
	Stage	Edaphic Climax
Successional Trends	Dominants	herb dominated cover of: cow parsnip fireweed tall bluebells alpine meadowrue common horsetail
	Associates	tall larkspur Indian hellebore arrow-leaved groundsel bracted lousewort
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	——
	Moderate (5-15% cover)	
Comments: herbaceous rich site		

WM	Netted willow - entire-leaved mountain-avens, ridge habitat class	Biogeoclimatic Unit AT
Description: moderate to steep slopes; shallow colluvium		
	Map Symbol	WM
	Stage	Edaphic Climax
Successional Trends	Dominants	shrub / forb cover of: netted willow entire-leaved mountain-avens spotted saxifrage low cover of lichens
	Associates	arctic bluegrass mountain monkshood moss campion one-flowered cinquefoil
Potential Winter Forage for Wild Ungulates	Abundant (above 15% cover)	
	Moderate (5-15% cover)	
Comments:		